

CHILD NUTRITION

Less Waste
Better Health



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FOREWORD

Those who are concerned for the health of children have watched with interest and concern the "child health program" as it has progressed through the various stages of physical education, physiology, and, later, health habit formation as taught in the schools. It has been apparent that important as the contributions of these three movements have been, they have not solved the problem of providing children with sound bodies as instruments for every day living, and, indeed, they could not for many precious years have been lost before the child has come under their influence. Moreover, their influence was exerted for only a few hours out of each week, while body building for health is a continuous process throughout 60 seconds of every hour, 365 days of every year.

The nutrition movement in relation to child health strikes at the root of the problem and promises to solve it, not only by training of the child himself in food habits, but by the education of his responsible parent or guardian as to his nutritional needs, so that sure foundations for health shall be laid during prenatal months and in the years of infancy and childhood.

It is our hope that this pamphlet will serve as a guide, not only to institutional workers, where the factor of economy must be considered, but to many others who have the grave responsibility of supplying the young and growing body of the child with food substances in proper quantity, quality and variety; properly cooked; served at suitable intervals, under satisfactory conditions to promote sound body building, with bones that are strong, muscles capable of development by training, and tissues and organs resistant to disease.

Anyone who will apply the information contained in this pamphlet to the feeding of the individual child or to the institutional family of children will secure the maximum results in health at a minimum cost.

Ellen C. Potter, M. D.

Secretary of Welfare.

INTRODUCTION

Those things which occur daily make cumulative impressions and in the course of time are accepted as correct and even necessary. This is especially true in institutional administration.

The executive and the staff live in an environment endowed with time-honored practices some of which are detrimental to those the institution serves. Because of the frequency of occurrences of these practices, and because of the administrative problems involved in supplanting them with modern scientific methods, they become an accepted part of the daily routine.

This Bulletin does not wish to suggest administrative procedure. It does hope to challenge the attention of all those who are guardians of child health.

Science, today, recognizes nutrition as a fundamental factor in building up the child physically, mentally, and morally. It is proving that nutrition achieves its best results when love, correct mental attitude, happy environment, and hygienic living are properly related to scientific feeding.

Department of Welfare,

Administrative Nutrition,

Katharine A. Pritchett, *Consultant.*

CHILD NUTRITION

TO GET WELL }
TO KEEP WELL } WHICH?

TO KEEP WELL

Builds healthy boys and girls

Adds to the joy of living

Cuts down medical expense

SAVES MONEY

FOR HEALTH

SERVE PLENTY OF

Dairy products—rank first among tissue building, blood building, growth producing foods

Whole grain cereals and flours—build the body, produce energy, stimulate growth, have laxative properties

Fresh vegetables and fruits throughout the year—stimulate digestion and growth, cleanse the body, tend to prevent or relieve anemia and constipation, make the body more resistant to disease, save doctors', nurses', and dentists' bills and the Superintendent's time; economical whatever the market price

Less expensive vegetables

Root vegetables: carrots beets turnips onions parsnips potatoes

Leafy vegetables: cabbage kale dandelion greens silver leaf (lamb's quarter) turnip-tops beet-tops chard water cress spinach

Dandelion greens, silver leaf, and water cress need no cultivation.

Spinach, because of richness in minerals and in growth-producing properties, is actually cheap whatever its market price.

When fresh vegetables, dairy products, whole grain cereals and flours, and eggs—foods which stimulate growth—are scarce, foods rich in growth-producing properties may be had through the germination of dry beans, peas,

and grains. Germination may be produced by soaking for 24 hours at the room temperature, then spreading thinly on a porous surface and allowing to remain for 48 to 72 hours. When rootlets appear, cook immediately at high temperature until soft. Continued cooking toughens the fiber.

Young shoots which grow on the tops of old turnips, also the shoots that appear on endive which has been stored, are growth-producing foods.

If the body is not fed foods which stimulate growth, it has not the power to use other foods to the fullest capacity.

Soups—high in food value, easily digested, appetizing luncheon or supper dishes

Cream, cereal, vegetable, puree of vegetable—no thin watery soup

Meat substitutes—nourish but stimulate less than meats

Eggs, cheese, milk, peanuts, peas, beans, lentils, macaroni, spaghetti, rice, hominy

Meat substitutes should be used two or three times a week in place of meat as the main dish for dinner. When starchy foods are used as the main dish the vegetable should be preferably a leafy green, rather than another starchy vegetable, such as lima beans, peas, and others.

Natural sugars—build tissue, produce body fat, stimulate growth, give energy, satisfy appetite for candy.

Bee honey; pure molasses; sugars: beet, cane, and maple; prunes, raisins, figs, dates

Water—cleans the inside of the body; helps to regulate its internal movements; tends to prevent constipation—drink frequently.

REMEMBER

That tea and coffee have no food value in themselves—they stimulate

Stimulation injures the child. It is cheaper to spend the equivalent for milk, which has high food value.

That to-be-cooked cereals have more food value than commercial ready-to-eat cereals

The to-be-cooked cereals—oatmeal, cracked wheat, hominy grits, whole cornmeal—cost approximately the same per unit as the ready-to-eat cereals—corn flakes, puffed rice; but they contain more **nourishment** and furnish a **greater number of servings** per unit than ready-to-eat cereals, hence are more **ECONOMICAL**. Ready-to-eat cereals may be served advantageously in warm weather.

That food which costs the **LEAST MONEY** is not always the **CHEAPEST**

Cheap foods are those high in food value, but low in cost.

That dairy products, fresh vegetables, and fruits are essential for health and growth

Serve them throughout the year. Whatever the cost, they are cheaper than doctors—than frail girls and boys—than handicapped citizens.

That condiments do not nourish—they stimulate

Spices, peppers, mustards “whip up”—do not buy them. Save your money. Save your child. When his digestion needs to be “whipped up” try a change of diet; remove causes of nervous tension; provide out-door play and rest periods during the day; have him examined by a physician.

That candy or other sweets eaten between meals are apt to irritate the mucous linings; dull the appetite; produce flabby muscles, decayed teeth, weak digestion

That eating between meals, other than fruit, should be discouraged

Except when the child is young; is undernourished; is malnourished

Except when 4½ to 5 hours elapse between meals

Except when the child is passing through a mental or physical strain

Food served between meals should be nourishing and easily digested, such as graham or oatmeal crackers and milk. When these take away the appetite for the next meal, substitute fresh fruit or tomato juice. These, especially orange and tomato juice, furnish a certain amount of nourishment and stimulate the appetite rather than satisfy it. Serve no cake, pastry, pies, crullers, candy, pickles, or meat.

That the food the child leaves on his plate does not nourish him, therefore

Stimulate appetite and digestion

By providing outdoor recreation

By requiring the very active, the frail, the exhausted child to rest quietly on bed or cot in warm, well ventilated room for at least ten minutes before eating,—fatigue causes indigestion and loss of appetite

By serving meals at regular hours

By serving fresh, good quality food, appetizingly cooked, prepared in a variety of ways

By avoiding heavy pastry, fried foods, and rich cake, which tax the digestion

By serving food attractively—with tablecloth and dishes spotlessly clean

By serving in a flyless, well ventilated, well lighted dining room, heated in winter to not less than 68 degrees Fahrenheit

By maintaining a cheerful, happy atmosphere during the meal hour; permitting no unpleasant scenes to arise through the correction of a child or the discussion of unpleasant happenings

Unhappiness, worry, anger, fear inhibit appetite and retard digestion

That food taken on the plate and not eaten is needless waste; unnecessary expense

Large servings discourage, and sometimes nauseate, the child who eats lightly, therefore

Teach the child

To be satisfied with moderate first helpings

To feel free to ask for second helpings

To like all foods

This is accomplished through education and not by force. It requires a sympathetic understanding of the child's likes and dislikes. It necessitates variety in the combination and preparation of foods—many methods and devices—example set by the adults. It demands **PATIENCE**. But it can be done.

NOW IS THE TIME—to begin a health education program; to teach the relation of food to health

All children must be taught the value of food in building a strong body—an alert mind. Teach health as a game, with fun and happiness for all. Organize your children into health committees whose duties shall be to encourage the eating of all types of food, to prevent food waste, to be good health scouts.

SUPERINTENDENTS—Remember that good nutrition reduces your behavior or disciplinary problems

The vegetable plot, however small, when the child's very own, stimulates the feeling of ownership, ensures variety of vegetables, affords recreation, promotes health.

TEACH—That nutrition does not depend upon food alone

Nutrition also depends upon: Eating slowly—Chewing thoroughly—Happy thoughts—Good will toward all—Breathing in plenty of fresh air, by day and by night—Playing in the sunshine—Pleasurable work—A cheerful, wholesome environment—Freedom to live a normal life—Long hours of sleep—Removal of physical defects—Firm but kindly discipline

M E N U S

For children eight years of age or older

Desirable Combination

Breakfast

Stewed dried peaches
Cracked wheat—whole milk—no
sugar
Whole grain bread—stale or
toasted—butter
Cocoa— $\frac{2}{3}$ milk—sugar

Dinner

Turkish pilaf
Baked carrots
Cold slaw (boiled dressing)
Brown bread
Indian pudding—whole milk

Supper

Peanut cream soup (thick)
Oatmeal muffins
Molasses
 $\frac{1}{2}$ pint whole milk

Undesirable Combination

Breakfast

Fried potatoes
White bread—butter
Coffee, milk, sugar

Dinner

Frankfurters
Boiled potatoes
Lima beans
Rice pudding
Tea, milk, sugar

Supper

Hash
Fried potatoes
Bread
Tea, milk, sugar

Under eight years of age—substitute

Oatmeal or farina for cracked wheat
Baked potato with butter for Turkish pilaf
Cooked cabbage or spinach for cold slaw

“The usual three meals a day should consist of milk, butter, bread, cereals, vegetables, fruits, some sweets and a little meat.”—Dr. Graham Lusk.

KNOW YOUR CHILD'S PHYSICAL CONDITION

Weigh* the apparently well child, monthly; the child below par, weekly.
Measure the height* of each not less than three times a year.

Note indications of defective nutrition:—

Physical Appearance: high shoulder blades—sunken chest—slouchy posture—flabby tissue—lack of endurance—sallow complexion—dull eyes—lusterless hair—mental slowness—enuresis—twenty per cent or more over-weight for height and age

Personal Characteristics: irritability—sensitiveness—bashfulness—fear—worry—fault-finding—lack of desire to play—shirking work—unwillingness to give and take—slight desire for substantial foods, more fondness for sweet foods

The child ten per cent or more below weight, also, the child twenty per cent or more above weight for height and age, and who shows other indications of malnutrition, should be under the care of a physician. The child less than ten per cent under weight should receive special care in the Home as to: diet; rest periods during the day; light work or play, or even absolute rest in the sunshine, with the head protected; long hours of sleep at night. Failing to gain in weight and in muscular strength, the child should be placed under the care of a physician. Discipline should be firm but gentle, until the child grows strong, when much so-called stubbornness and badness will disappear.

Stature, endurance, longevity, and resistance to disease are everywhere more directly related to the diet than to other factors.—J. S. PURDY, *Journal of the Royal Sanitary Institute*.

Every live thing that is young must grow; growth is evidence not only of health but of life. The growth of the body is conditioned by its nutrition.—L. EMMET HOLT, M. D.

*Weight—Height—Age Tables by Bird T. Baldwin and Thomas D. Wood, Division of Documents, Washington, D. C.

THE SCHOOL LUNCH

The child who remains in school during the noon hour needs a nutritious lunch, preferably a hot lunch prepared in the school. When this is not possible, and a cold lunch must be taken from the Home, special attention should be given to the type of food used, to its packing, and to the care of the box.

Foods which should NOT go into the lunch box

Sandwiches—made of white bread only, and fillings of fat pork or of fried meat, with mustard

Eggs cooked in boiling water

Pickles of any kind

Hot dogs with mustard

Pies of any kind

Layer cake of any kind

Bread soaked in molasses

Coffee and tea

Cheap, impure candies

Foods which SHOULD go into the lunch box

Sandwiches made of

Bread

Whole grain, raisin, or white bread

Fillings

Creamery butter—on both pieces of bread

Peanut butter, mixed with milk or oil to lessen stickiness

Peanut butter and chopped raisins

Jelly; jam

Lettuce leaves—two or three dipped in French dressing

Lettuce leaves with cooked, chopped or whole slice bacon

Fruits—a combination of any two or three of the following fruits, ground to a paste and softened with milk or butter: prunes, raisins, dates, figs, stewed dried apricots, stewed dried peaches

Eggs—coddled 20 to 30 minutes, served whole or mashed and mixed with butter or small amount of chopped meat

Cottage cheese or cream cheese, plain or combined with chopped olives or with the above fruits mashed, or, with mashed egg

Drinks

Milk—not less than a half-pint

Cocoa

Cocoa made at home may be used two of the five school days, provided it can be heated at school. On these days it should not be used for breakfast. Whenever possible encourage the school authorities to have cocoa made at school, allowing the children to pay the cost of raw materials. Containers must be thoroughly cleaned each day.

Canned tomato juice (small amount)—palatable, stimulates growth

Water in which vegetables have been cooked—appetizing, nourishing, when salted and heated

Fruit

Fresh fruit: apples, oranges, ripe bananas (skin dark brown)

Sweet fruit: figs, dates, raisins

Dried stewed fruit: apricots, apples, peaches, prunes

Canned fruit: peaches, pears, cherries

Dried stewed fruit and canned fruit are conveniently carried in small jelly glasses with close fitting covers, or in heavy paper cups with close fitting lids.

Dessert

Cake: cookies, sponge cake, plain cake, ginger-bread, sweet or whole grain crackers

Cup custard, junket, fruit gelatine, bread pudding, or some light dessert left over from previous day, with part of drinking milk used as sauce.

Candy: small piece of home-made candy or chocolate to be eaten at close of lunch

Fruit: see "Fruit"

Nuts: a small amount

Extras for children over ten years of age

Sandwiches made of

Bread

Nut bread

Fillings

Sliced lean meat without mustard—when same is not to be served for dinner

American cheese

Nuts—chopped or ground and mixed with butter; with ground figs, dates, or raisins; with cream or cottage cheese

Raw vegetables—thoroughly washed

CARROTS

CELERY

TOMATOES

LETTUCE

CABBAGE

When breakfast is served at 7:00-7:30 the child should have something to eat at the morning recess, such as a part of his milk with two whole-grain crackers, or a bread and butter sandwich, or some fruit. Meat, cheese, egg, jelly or jam sandwiches, which dull the appetite for the noon meal, should not be eaten at this time: nor should any of the sweets provided for the noon luncheon.

When the lunch box contains food that will spoil easily—such as meat, eggs, and the soft cheeses—it should be kept in a cool place. Cold food retards digestion, therefore, during the winter months the lunch box should be put in a warm room for an hour before the lunch is eaten.

Lunch boxes should be clean; paper napkin supplied; sandwiches wrapped in paraffined paper. An attractive lunch box prevents doctors' bills and helps discipline.

For the school lunch box

Desirable

1/2 pint milk or cocoa
Two sandwiches
Whole grain bread
Filling — prunes, figs and dried apricots cooked together, mashed and mixed with butter
Raisin bread
Filling — chopped bacon mixed with cooked natural brown rice, spread on lettuce leaves and placed between bread
Five or six shelled peanuts
Soft gingerbread
Small piece of home-made candy or chocolate bar

Undesirable

1/2 pint coffee, milk and sugar
Two sandwiches
White bread
Filling—sliced American cheese
White bread
Filling—cold sliced pork or a frankfurter
A slice of lemon pie
One piece of layer cake
Cheap, impure candy

The desirable lunch is more easily digested than the undesirable one. It costs no more; probably less.

THE FOOD BUDGET

Approximately one-fifth of all the money appropriated for the maintenance of children in institutions is spent for food—Therefore

Stop the leaks

Have a refrigeration plant, if, needed. If not, have an ice box. Keep it cold—38 to 40 degrees Fahrenheit. To save ice means to lose food. Food costs more than ice. To eat tainted or partly spoiled food is harmful. It is cheaper to throw it away.

An ice box should be lined throughout with porcelain; if this is too expensive use some metal that is easy to clean. An unclean ice box contaminates food, which if eaten, endangers health. An ice box should have several compartments, one of which should be used exclusively for dairy products because they absorb odors readily.

Have a well ventilated, dry, rat-proof, cool or cold storeroom for storing white potatoes, root vegetables, fresh fruits. Sweet potatoes and bananas need a dry, moderate temperature. Divide storeroom into sections—store one vegetable only in a section. When location of building permits, a cave root-cellar is desirable. Much can be saved by buying root vegetables and certain of the fresh fruits in summer and fall and storing.

Have a well ventilated, dry, rat-proof, cool or cold storeroom for staple products. Equip it with bins; wall shelving; movable floor shelving; platforms 2 to 3 inches from floor, for flour barrels and other large containers. Label shelves according to food classifications. Place each food on shelf designated. Organization of storeroom saves **LABOR**, therefore **MONEY**.

Keep storeroom locked—give key to one person only, and hold him responsible

Organize food activities, if possible, so that storeroom is opened not more than once a day.

When food supplies are delivered, examine, weigh, or measure; then place in storeroom without delay.

If goods are delivered in an unsatisfactory condition notify firm and return undesirable portion or deduct cost.

Take advantage of discounts for cash payment—much can be saved during the year. If funds are not available to meet payments,

notify Board of Directors of amount lost through failure to pay promptly. Submit to the Board, through its secretary, a quarterly statement of money thus lost—it will be convincing.

Requisition all foods in writing, using approved requisition blanks. File in main office for future reference.

Requisition daily food supplies on basis of the average amount of cooked food consumed daily. Requisitions should allow for waste in cleaning, and for shrinkage or expansion in cooking, but not for unnecessary table waste. Such waste can be prevented by careful planning and supervision of food service.

Sort vegetables and fruits frequently to prevent decay.

Supervise cleaning of raw vegetables and fruits—much may be wasted which should be cooked.

Cook tops of carrots, beats, turnips. Use celery tops in soup. Shred outer green leaves of lettuce and serve in salads.

Water in which vegetables have been cooked are rich in body-building materials. Save them from the sink and use in soups and sauces, and as drinks. Hot spinach water taken before breakfast helps to relieve constipation.

For cooking purposes, oil may be substituted for butter. Oils furnish fat but are lacking, or, low in growth-producing properties. Therefore, when substituting oil, increase consumption of milk and green vegetables.

Keep milk and butter in covered containers—they lose some of their growth-producing properties when exposed to the air.

Save fuel. Have a range that gives the maximum amount of heat. Experiment with different grades and sizes of coal to determine which grade and size yields the greatest amount of heat. Much money can be wasted by using a range that does not heat well, and a grade and size of coal not suited to the range. Lower the fires during the afternoon when stove is not in use; bank the fires at night.

Conservation of gas may be insured by placing the kitchen on a separate gas meter. After the meter has been installed an experiment should be conducted, lasting four to six weeks, to determine the amount of gas consumed. Use this amount as a standard and hold the head cook responsible for keeping within this limit. Such an arrangement will serve as a check on burning the gas when not needed; on turning the flame unnecessarily high; on using a large burner when a smaller one would answer the purpose; and on allowing air conductors to become clogged.

Leaking hot water faucets and steam pipes increase both water and fuel consumption—hence the cost. Keep them in order.

Make a study of the duties and movements of the employes. Do they stand at their work when they might better sit? Do they conserve energy and time or waste them? An organized analysis of the job may lead to the employment of fewer employes; it may increase efficiency while reducing expenditures.

Study height and placement of stationary equipment. Have height of each piece adjusted to suit the greatest number of employes. If too high or too low, extra energy is consumed. To spend energy unnecessarily is to waste money. Place large pieces of equipment so as to require the fewest steps and the least time in going from one to the other. To pay for unnecessary movements is to waste money.

Prevent food waste

Plan menus ten days in advance in cold weather—two or three days in advance in warm weather.

Planning menus for a ten day period in winter rather than for a few days or a week saves energy, time, and worry, and prevents **MONOTONY**. Repeat the menu of Monday of the first week on Thursday of the second week and so on throughout the ten days. Except when a food is repeated frequently for its preventive or curative properties, avoid using any but the staple foods twice during the ten days. If necessary to repeat, prepare the article in a different style each time.

Anticipate left-overs—plan to make them into attractive dishes.

Remove the element of guess in cooking. Have a more delicious dish by standardizing the portions given in recipes on the basis of the per capita consumption of the prepared product.

Plate scraps become garbage. Collect, weigh and record amount after each meal. More than one-and-one-half ounces a day per capita, of edible garbage is a warning. Investigate cause—preparation, cooking, service, appetites. One or all of these may be the cause of unnecessary waste.

Spend wisely

Watch the market.

Establish cordial relations with reliable firms, municipal markets, farmers. Solicit their interest in notifying the institution when they have on hand perishable foods which cannot be held over, and therefore can be purchased at a reduction.

Buy in large units except when a small unit is more convenient and costs the same.

Buy staple products when prices are low, and store for future use.

Buy fresh fruits and vegetables when markets are glutted—they are cheapest at this time. Serve plentifully, and can for winter consumption.

Buy a food of high value rather than one of low food value, even though the former costs more—it saves money.

Buy only what you can see either in sample or in bulk. Make sure of its freshness, its quality. Do not buy over the telephone.